

REMARKS

Applicant's representative would like to thank Examiner Masih for the courtesies extended during a telephonic interview conducted on September 8, 2009. During the interview, Applicant's representative requested a clarification of the rejections under 35 U.S.C. §§101 and 112. While no agreements were reached, the Examiner seemed receptive to proposed amendments to Claim 1. Furthermore, Applicant's representative presented arguments to the Examiner traversing the rejection of Claims 1-32 under 35 U.S.C. §103(a). No agreements were reached regarding this rejection. Furthermore, no exhibits were shown or demonstrations conducted.

Claims 1-38 are now pending in the application. By this Paper, Claims 1, 6, 7, 11, 18, 20, 21, 23, 24, 26, 29, and 32 have been amended. The basis for the foregoing amendments can be found throughout the specification, claims, and drawings originally filed. No new matter has been added. The preceding amendments and the following remarks are believed to be fully responsive to the outstanding Office Action and are believed to place the application in condition for allowance. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 101

Claim 18 stands rejected under 35 U.S.C. § 101 for lacking an implicit or explicit tie to a machine. This rejection is respectfully traversed.

The Examiner asserts Claim 18 is not patent-eligible because no particular machine is necessary to perform any of the claimed method steps. See Office Action

mailed June 17, 2009 at Page 2, Section 1. During the telephonic interview with the Examiner conducted September 8, 2009, the Examiner asserted that a machine must physically **perform** the claimed method steps in order for the claimed method to be patent-eligible. Applicant respectfully submits that no such requirement exists under current case law. To the contrary, the Federal Circuit has stated that even a claim that “lacks any ‘physical steps’ but is still tied to a machine or achieves an eligible transformation passes muster under §101.” *In re Bilski*, 88 U.S.P.Q.2d at 1396.

Applicant respectfully submits that a method claim is patent-eligible under 35 U.S.C. § 101 if it is tied to a particular machine or apparatus, **or** if it transforms an article into a different state or thing. *In re Bilski*, 88 U.S.P.Q.2d 1385, 1391 (Fed. Cir. 2008); (See also, The Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. §101 issued August 24, 2009 at Page 5). “A new or different function or use can be evidence that an article has been transformed.” *Id.* Furthermore, the Interim Examination Instructions state that the transformation of the particular article must impose a meaningful limitation on the claim’s scope and must not be insignificant extra-solution activity. *Id.*

Applicant notes that Claim 18 recites a method of arranging magnetic field detectors in a linear motor including assembling first and second magnetic field detectors on a stator member so as to be a nominal predetermined distance apart. Applicant respectfully submits that the claim includes a transformation of the magnetic field detectors and the stator member into different states or things because once these articles are assembled, they have new and different functions.

Furthermore, the assembling process includes a meaningful limitation and is not merely an insignificant extra-solution activity. Assembling the magnetic field detectors onto the stator member transforms the article because the new method of arranging magnetic field detectors in a linear motor cannot be performed without assembling the magnetic field detectors in the claimed arrangement.

The Federal Circuit's holding in *Bilski* does not unequivocally require method steps to be performed **by** the machine. Rather the Federal Circuit's holding is meant to foreclose patent-eligibility to methods that are capable of being "performed entirely in the human mind." *In re Bilski*, 88 U.S.P.Q.2d at 1396, FN 26. Applicant submits that the method of Claim 18 cannot be performed entirely in the human mind, as assembling the magnetic field detectors on a stator member so as to be a nominal predetermined distance apart is a physical step transforming a particular article into a different state or thing. Accordingly, Applicant respectfully submits that the subject matter of Claim 18 is patent-eligible under 35 U.S.C. §101.

In light of the foregoing, Applicant respectfully submits that Claim 18, as well as Claims 19-22, dependent therefrom, are in condition for allowance. Reconsideration and withdrawal of the rejection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 112

Claims 1, 18, 23, and 24 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

Regarding Claim 1, the Examiner asserts that Claim 1 is lacking structure that determines ideal working distance and compares the nominal predetermined distance to the ideal working distance. Applicant submits the subject matter being claimed in Claim 1 includes a linear motor having first and second magnetic field detectors separated by an actual distance, wherein a nominal distance is different from an ideal working distance. The recited distance between the magnetic field detectors provides sufficient structure. Applicant respectfully submits that Claim 1 need not recite structure that determines ideal working distance and compares the nominal predetermined distance to the ideal working distance. The subject matter recited in Claim 1 is that which Applicant regards as his invention. MPEP §2172(I) states that “the invention set forth in the claims must be presumed, in the absence of evidence to the contrary, to be that which applicants regard as their invention.”

Further, the Examiner submits that the terms “ideal working distance” and “reality” are vague and indefinite. Without conceding the correctness of this assertion, Applicant has amendment Claims 1 and 23 to delete the term “reality” and to further define the term “ideal working distance.”

Regarding Claims 18 and 24, the Examiner submits that the preamble “method of making a linear motor” is inappropriate, as steps are missing that disclose a rotor and windings. Without conceding the correctness of this assertion, Applicant has amended the preambles of Claims 18 and 24 to recite a method of arranging magnetic field detectors in a linear motor and a method of configuring magnetic field detectors in a linear motor, respectively.

In light of the foregoing, Applicant respectfully submits that Claims 1, 18, 23, and 24 are in condition for allowance. Reconsideration and withdrawal of the rejections are respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kelly (GB 2,235,783) in view of Rohner et al. (U.S. Pat. No. 6,316,848). This rejection is respectfully traversed.

Kelly discloses a linear motor including a stator (1), a moving part (2), a plurality of magnets (M) disposed on the stator (1), and Hall effect sensors (10) proximate said stator (1). See Kelly at the Abstract and Figures 1a and 5. The Hall effect sensors (10) are spaced relative to each other such that their output yields voltage waveforms phase shifted 90 degrees relative to each other. See Kelly at Page 8, lines 30-35; and Figures 5 and 6a.

Rohner et al. disclose a linear motor (4) having a stator (40), a runner (42), and Hall sensors (43, 44) disposed on the stator (40). See Rohner et al. at Col. 3, lines 61-67. In an ideal case, the Hall sensors (HS1, HS2, 43, 44) are arranged in the stator (40) having a distance (a) between each other such that they produce a signal phase shifted by 90 degrees. See Rohner et al. at Col. 2, lines 27-32; Col. 4, lines 1-4; and Figures 1 and 6. While Rohner et al. recognize that manufacturing tolerances allow actual distances between the Hall sensors (HS1, HS2, 43, 44) to be different from the distance (a), the nominal distance therebetween is equal to the distance (a), i.e., the distance at

which the Hall sensors (HS1, HS2, 43, 44) produce signals that are phase shifted by 90 degrees relative to each other.

Contrary to the cited art of record, independent Claims 1 and 18 recite a nominal distance between magnetic field detectors that is ***different*** from an ideal working distance, the ideal working distance being a distance at which the magnetic field detectors produce ideal signals. This is directly contrary to the teaching of Rohner et al. to provide the Hall sensors (HS1, HS2, 43, 44) at a nominal distance apart from each other that is ***equal to*** the ideal distance (a). Spacing the magnetic field detectors at a nominal distance that is different from the ideal working distance, as claimed, would have been counterintuitive to one of ordinary skill in the art because, as the cited art demonstrates, one of ordinary skill in the art would have been motivated to space the magnetic field detectors at a distance as close as possible to the ideal working distance.

Independent Claim 24 recite a method of analyzing signals from the magnetic field detectors to determine a correction signal and adjusting correction means to provide that, in use, the correction signal is synthesized and used to correct the output of said first magnetic field detector so that the signals after correction more closely correspond to ideal signals. Independent Claim 23 recites correction means arranged to synthesize a correction signal for correcting an output signal of a magnetic field detector. Applicant submits that the cited art of record fails to disclose or suggest such elements. Specifically, Rohner et al. discloses storing, in a memory unit (470), predetermined characteristic data regarding the manufacturing tolerances, manufacturing codes, serial numbers, phase shift information, or other known information that indicates that the distance between the Hall sensors (HS1, HS2, 43, 44)

will be different from the ideal distance (a). See Rohner et al. at Col. 4, lines 9-38. Rohner et al. state that these deviations “are taken into account and where appropriate corrected.” See Rohner et al. at Col. 4, lines 38-43. Rohner et al. fail to elaborate on how these deviations are “taken into account” and “corrected.” Moreover, Rohner et al. are completely silent with respect to analyzing signals from the magnetic field detectors to determine a correction signal and adjusting correction means to provide that, in use, the correction signal is synthesized and used to correct the output of said first magnetic field detector so that the signals after correction more closely correspond to ideal signals.

In light of the foregoing, Applicant respectfully submits that independent Claims 1, 18, 23, and 24, as well as Claims 2-17, 19-22, and 25-32, dependent therefrom, are in condition for allowance. Reconsideration and withdrawal of the rejection are respectfully requested.

ALLOWED CLAIMS

Applicant gratefully acknowledges the allowed Claims 33-38.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and

favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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